CLAIMS:

1. A device for shaving hairs growing from skin, comprising a base portion having a grip, a shaving head carrying at least one blade-shaped cutting member having at least one cutting edge, and an actuator for effecting a periodical motion of the cutting member relative to the base portion, characterized in that the shaving head is pivotable relative to the base portion about a pivot axis, and the periodical motion of the cutting member is a periodical motion relative to the shaving head.

2. A device as claimed in claim 1, characterized in that the shaving head comprises a skin contact member defining a skin contact surface, the pivot axis extending substantially parallel to the skin contact surface.

3. A device as claimed in claim 1, characterized in that the periodical motion has a motion component which extends substantially parallel to a main cutting direction of the cutting member, the pivot axis extending substantially perpendicularly to the main cutting direction.

4. A device as claimed in claim 3, characterized in that the periodical motion is a reciprocating motion in a direction substantially parallel to the main cutting direction.

5. A device as claimed in claim 3, characterized in that the cutting member comprises a single straight cutting edge, the pivot axis extending parallel to the cutting edge and, seen in the main cutting direction, being arranged in front of the cutting edge.

6. A device as claimed in claim 1, characterized in that the device further comprises a pretensioning member which defines a skin contact pressure exerted by the cutting member on the skin during operation.

7. A device as claimed in claim 6, characterized in that the pretensioning member comprises a mechanical spring mounted to the shaving head and to the base portion for

exerting a pretensioning torque on the shaving head about the pivot axis.

8. A device as claimed in claim 1, characterized in that the actuator is arranged in the base portion and effects the periodical motion of the cutting member via a transmission system which is partially arranged in the base portion and partially arranged in the shaving head.

9. A device as claimed in claim 1, characterized in that the shaving head is releasably mounted to the base portion.

10. A device as claimed in claim 1, characterized in that the cutting member is releasably mounted to the shaving head.

11. A device as claimed in claim 8, characterized in that the base portion comprises a rotary motor having an output shaft driving a rotary transverse shaft through a gear system, wherein said transverse shaft is supported in the shaving head and positioned parallel to the cutting edge, and wherein said transverse shaft is provided with an eccentric disc at each end of it, wherein each eccentric disc is supported in a bearing in a drive member, so that at least a part of said drive member makes a reciprocating motion in a main cutting direction of the cutting member, wherein the said parts of the drive member engage both ends of the cutting member.

12. A device as claimed in claim 8, characterized in that the base portion comprises a rotary motor having an output shaft driving two transverse members extending parallel to the cutting edge, so that the two transverse members make reciprocating motions parallel to the cutting edge in mutually opposite directions, wherein each transverse member connects said output shaft with the first end of a lever member extending substantially parallel to said output shaft, wherein both lever members are hingedly supported in the base portion so that the second ends of the lever members make opposite reciprocating motions parallel to the cutting edge, which ends engage means for driving the cutting member in a main cutting direction of the cutting member, said means being present in the shaving head.

13. A device as claimed in claim 8, characterized in that the base portion comprises a rotary motor having an output shaft driving two hinging members, which

members hinge in a plane through the axis of the output shaft and extend parallel to the cutting edge, wherein a first part of each hinging member is driven by the output shaft in a reciprocating motion substantially in a direction perpendicular to the output shaft, and wherein a second part of the hinging member can make a reciprocating motion substantially parallel to the output shaft, and wherein each of said second parts is connected through drive means to the cutting member in order to drive the cutting member in a reciprocating motion in a main cutting direction of the cutting member.

14. A device as claimed in claim 8, characterized in that the base portion comprises a rotary motor having an output shaft driving inner cables of ends of two Bowden cables extending parallel to the cutting edge, so that the inner cables make reciprocating longitudinal motions relative to the respective outer cables, wherein each inner cable connects said output shaft to drive means for driving the cutting member in a reciprocating motion in a main cutting direction of the cutting member.

15. A device as claimed in claim 8, characterized in that the base portion comprises a rotary motor having an output shaft driving two transverse elements extending substantially parallel to the cutting edge, wherein the two transverse elements are substantially positioned in said pivot axis, wherein the rotary motion of the output shaft is converted into reciprocating motions in opposite directions of the two transverse elements, and wherein the ends of the transverse elements are connected with means for driving the cutting member in a main cutting direction of the cutting member.

16. A shaving head suitable for use in a device for shaving hairs growing from skin, the shaving head carrying at least one blade-shaped cutting member having at least one cutting edge, the shaving head further comprising a coupling member by means of which the shaving head can be coupled to a base portion of said device, said base portion comprising a grip and an actuator for effecting a periodical motion of the cutting member relative to the base portion, characterized in that the periodical motion of the cutting member is a periodical motion relative to the shaving head, and the shaving head comprises a pivot member by means of which, in a condition where the shaving head is mounted to the base portion, the shaving head is pivotable relative to the base portion about a pivot axis.